this study demonstrate, for the first time, the high resource utilization and financial burden experienced by sIBM patients in the USA. Further data collection of this type is needed to better understand the true economic burden of sIBM not only in US but globally.

NEUROLOGICAL DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PND41

DESCRIPTION OF PROPHYLACTIC DRUG UTILIZATION PATTERNS IN MIGRAINE PATIENTS

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OBJECTIVES: Describe medication utilization patterns of migraine prophylactics in commercially insured patients. **METHODS:** Adult migraineurs (ICD-9 code 346. XX) newly initiating migraine prophylactics (no claims for 12 months before first (index) prophylactic prescription) between January 2007 and March 2013 were identified from the OptumInsight employer claims database and followed for 6 months. Prophylactics included antiepileptics (topiramate, divalproex, valproic acid), beta-blockers (propranolol, timolol), antidepressants (amitriptyline) and onabotulinumtoxinA. Continuous enrollment was required for 12 months pre-index and 6 months post-index. To increase the specificity of migraine prophylactics, patients with prior diagnoses for conditions for which their prescribed prophylactics were also indicated (i.e., epilepsy for antiepileptics, hypertension/congestive heart failure for beta-blockers, and depression for amitriptyline) were excluded. Outcomes of interest were medication adherence (medication possession ratio [MPR]), discontinuation (>30-day gap between prescriptions), and switching patterns. Time to discontinuation of initial prophylactic was described using Kaplan-Meier curves. **RESULTS:** 19,881 patients initiated prophylactic treatment with 12,136 (61%), 3,037 (15%), 4,163 (21%), and 545 (3%) patients initiating antiepileptics, beta-blockers, amitriptyline, and onabotulinumtoxinA, respectively. Mean (SD) MPR for any prophylactic was 0.49 (0.31) (0.34 (0.27)—valproic acid to 0.67 (0.22)—onabotulinumtoxinA) with a mean (SD) of 89.2 (56.7) days on treatment over 6 months. Discontinuation rates were high ranging from 74% (topiramate and onabotulinumtoxinA) to 90% (valproic acid). Switching rates ranged from 6% (topiramate) to 20% (valproic acid). Between 46% (topiramate) and 68% (timolol) patients discontinued treatment after the first prescription, and median days to discontinuation of initial treatment ranged from 30 (valproic acid, divalproex, timolol, amitriptyline) to 84 days (onabotulinumtoxinA). **CONCLUSIONS:** Adherence to migraine prophylactic medications was poor with about 50% of patients discontinuing after their first prescription and over 75% discontinuing within 6 months. The large proportion of patients discontinuing after first prescription suggests further research is needed on reasons for discontinuation and better tolerated therapies.

PND42

A REVIEW OF METHODOLOGIES USED TO ASSESS ADHERENCE TO DISEASE MODIFYING THERAPIES AMONG PATIENTS WITH MULTIPLE SCLEROSIS

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OBJECTIVES: To review the methods currently used to measure adherence to oral and injectable disease modifying therapies (DMTs) in multiple sclerosis (MS) patients. **METHODS:** A systematic literature search was conducted using PubMed, CINAHL, PsychINFO, and Cochrane Library to identify articles assessing adherence to DMTs. The publication time frame was from January 2004 to November 2014. Studies were included if they focused on at least one U.S. FDA-approved injectable or oral DMT, assessed DMT adherence as either a primary or secondary outcome, reported DMT adherence rate(s), and included details of the method(s) used to calculate adherence level or proportion of adherers/non-adherers. **RESULTS:** A total of 36 studies met inclusion criteria. The majority (63.9%) of studies were conducted in the U.S. All studies assessed adherence to at least one injectable DMT, while two studies also included an oral DMT. Twenty-two studies used a cross-sectional, randomized controlled, or prospective observational study design. Among these studies, Multiple Sclerosis Treatment Adherence Questionnaire (MS-TAQ), Medication Event Monitoring System (MEMS), adherence diary, self-reported survey items (designed specifically for respective study), Morisky 4-item medication adherence scale (MMAS-4), and self-reported missed dose ratios were used to assess adherence. Fourteen studies employed a retrospective design, using medication possession ratios (MPRs) and proportion of days covered (PDC) to assess adherence. Although some of the measures (e.g., MEMS, MMAS-4, MPR, PDC) are well established, several of the self-reported items lack any evidence of reliability and validity. **CONCLUSIONS:** A plethora of methods have been used to assess DMT adherence, and each has its own unique advantage and disadvantage. The wide array of measurement methods and adherence definitions makes it difficult to compare adherence rates across studies.

PND43

ADHERENCE AND PERSISTENCE TO ANTI-EPILEPTIC DRUGS AMONG U.S. VETERANS DIAGNOSED WITH EPILEPSY

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OBJECTIVES: To evaluate patient adherence and persistence to anti-epileptic drug (AED) monotherapy. **METHODS:** Adult patients (age>18 years) with ≥2 epilepsy diagnosis claims (ICD-9-CM:345) or one epilepsy diagnosis claim and one claim for other convulsion (ICD-9-CM: 780.39) were selected from the U.S. Veterans Health Administration database (01OCT2008-30SEPT2013). Patients were required to have ≥1 AED prescription post-epilepsy diagnosis, and the first AED prescription claim date was designated as the index date. Continuous health plan enrollment 12 months pre- and post-index date was required. Patients were assigned to four monotherapy AED cohorts based on drug class: sodium channel blockers (SCs), gamma-aminobutyric acid analogs (GABAs), synaptic vesicle protein 2A binding (SV2) and multiple mechanisms (MMs). Adherence was assessed using the proportion of days covered (PDC) and persistence was defined as days to discontinuation with an allowable treatment gap of 45 days without the index AED. Logistic and Cox proportional hazards models were used to compare the results among the cohorts. **RESULTS:** Patients in the SC cohort had significantly lower baseline Charlson Comorbidity Index scores (1.82), indicating that they were healthier than those in the GAMA (2.08, p<0.001) and SV2 (2.46, p<0.001) cohorts. Patients in the SC cohort were significantly less likely to have a baseline psychiatric disorder (37.6%) than those in the GABA (63.8%, p<0.001) and MM (52.1%, p<0.001) cohorts. Patients treated with GABAs (OR=0.44, p<0.001) and MMs (OR=0.63, p<0.001) were significantly less likely to adhere to their medications (PDC <80%) than those treated with SC. Furthermore, patients treated with GABAs (hazard ratio [HR]=1.74; 95% confidence interval [CI]=1.59-1.90) and MMs (HR=1.18; 95% CI=1.07-1.29) were more likely to discontinue treatment during the follow-up period compared to those in the SC cohort. **CONCLUSIONS:** Patients treated with Sodium channel blockers are more likely adhere to treatment and have lower discontinuation of AED monotherapy than those treated with GABAs and MMs.

PND44

MEASURING ADHERENCE AND OUTCOME IN TREATMENT OF MULTIPLE SCLEROSIS IN THE GEISINGER CLINIC

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OBJECTIVES: This study examined the relationship between medication adherence and outcomes in multiple sclerosis (MS), where both concepts are more difficult to measure than in diseases like hypertension where most medications are taken orally and surrogate outcomes (e.g., blood pressure) are routinely collected. **METHODS:** MS patients age ≥18 years treated at Geisinger Clinic and taking an MS medication were surveyed three times, six months apart, to assess medication adherence and MS outcomes. Patients reported their doses taken in the past month (adherence), number of relapses, TQSM medication satisfaction score, and MSIS physical and psychological functional scores. Nonparametric bootstrap analyses were used to compare mean outcome scores among patients with and without missed doses. A sub-analysis on patients with Geisinger insurance claims was conducted to calculate patient's MS medication possession ratio (MPR) from 2004 to 2013 and compare this claim-based adherence measure with the other results. **RESULTS:** 306 patients completed 971 surveys. Most patients were white (99%), female (85%), ages 22 to 76 years old (median 50 years). Median time since initial MS diagnosis was 11 years. Mean self-reported adherence was 90% (median=100%, IQR=92-100%). Most patients (80%) reported zero relapses. Patients with no missed doses had significantly higher medication satisfaction than those with missed doses (77.5 vs. 72.5, p=0.0006) and better psychological function (32.7 vs. 37.7, p=0.017). There were no significant differences between groups in reported number of relapses or physical functional status. MPR could only be calculated for 95 patients (37 had claims but not enough to calculate MPR), was extremely high in this subgroup (mean 96%, median 98%) and did not show the same associations with patient outcomes. **CONCLUSIONS:** Medication adherence in the actively treated MS population is very high, whether measured by self-report or MPR. Patients with 100% adherence showed evidence of better medication satisfaction and psychological function than others.

PND45

WHAT ARE PEOPLE WILLING TO PAY FOR WHOLE GENOME SEQUENCING INFORMATION?

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OBJECTIVES: Whole genome sequencing (WGS) can be used to predict future disease risk or inform treatment. Current guidelines suggest only reporting variants that are clinically actionable. Reporting incidental or non-actionable findings could generate anxiety and unnecessary medical tests, but patients could miss valuable information if not reported. Over-treatment may occur by acting on findings prematurely, potentially causing harm and unnecessary resource use. We measure the value of WGS information using contingent valuation methods. **METHODS:** An online pilot survey (n=26 adults from US general population) was used to evaluate willingness to pay for a basic WGS report (recommended by guidelines), and genetic information excluded from the basic report (non-actionable findings) to inform a national survey. Respondents were initially asked whether they would purchase a basic WGS report for a specified dollar amount. A follow-up question increased or decreased cost of the report based on the initial response. Responses were used to identify ranges of willingness to pay for a basic report for each respondent. The same steps were followed to identify ranges for respondents' willingness to pay for information excluded from the WGS report. The initial costs in the questions were randomized across respondents. **RESULTS:** 42% of respondents (n=11) were not willing to pay anything for the basic report, and no respondent was willing to pay more than $1000 for the basic report. Most respondents (n=17, 65%) were not willing to pay anything for non-actionable genetic information, and only one person reported being willing to pay more than $400 for this information. **CONCLUSIONS:** A large number of participants perceived that genetic information can be harmful, as shown by respondents' lack of interest in this information even if it were free. Our findings also suggest that respondents were willing to pay more for actionable genetic information than for non-actionable findings.